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ABSTRACT

This fact sheet uses a question-and-answer format to summarize issues related to physical fitness in people with mental retardation. Questions and answers address the following topics: a definition of "physical fitness"; the components of physical fitness (muscle strength and endurance, flexibility, body composition, and cardiovascular endurance); how fitness levels of people with mental retardation compare to the general population (substantially lower); how muscle strength and endurance, cardiovascular endurance, and body composition (body fat) in people with mental retardation compare to that of the general population; evidence that people with mental retardation can improve their fitness level; barriers to fitness for individuals with mental retardation (motivation and opportunity); and examples of simple fitness routines. (DB)

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ARC Q&A #101-49

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Q&A

Physical Fitness in People With Mental Retardation

by James H. Rimmer, Ph.D.
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What is "physical fitness"?

Physical fitness is generally defined in two parts: The first part defines fitness as a physical condition that allows an individual to perform daily activities and still have enough energy for leisure activities. For example, if an individual is unable to make it through an eight hour work day or is too tired at the end of the day for leisure or household activities such as gardening, walking, playing tennis or cleaning, then the individual probably has a low level of physical fitness.

The second part of the definition states that a moderate to high level of fitness helps prevent certain diseases or conditions that may result from an inactive lifestyle. These are called "hypokinetic" diseases or conditions and include hypertension (high blood pressure), obesity, adult-onset diabetes, osteoporosis (brittle bones), depression, low back pain, and general tiredness. Individuals who are not physically fit often end up with these diseases and conditions, which ultimately affect their quality of life.

What are the different parts of physical fitness?

Physical fitness includes:

- Muscle strength and endurance
- Flexibility
- Body composition (body fat)
- Cardiovascular endurance (the ability of the heart, lungs and blood vessels to send oxygen to working muscles)

To be considered physically fit, a person must be well-conditioned in each of these four areas. Each area of physical fitness directly relates to the good health of the individual and to the person's ability to get through a day without feeling tired, and with enough energy left over for some leisure activity.

Muscle strength and endurance is needed for activities of daily living such as climbing stairs and carrying groceries, as well as in many manual labor jobs.

Flexibility is needed to perform activities of daily living such as reaching for overhead objects or bending down to pick something up off the floor. It is also needed to prevent tightness in the spine which could lead to low back pain. Good muscle strength and endurance combined with flexibility helps prevent injuries.

Body composition (the amount of fat stored in the body) is very important for good fitness. When body fat levels are high, the person is at a greater risk for a variety of health problems such as arthritis, back pain, heart disease, hypertension, depression and diabetes.

Cardiovascular endurance (the "granddaddy" of fitness) is the biggest contributor to good health. Good cardiovascular endurance allows an individual to have high energy levels throughout the day and lowers the chance for developing Type II diabetes, heart disease, stroke, and hypertension.

How do the fitness levels of people with mental retardation compare to the general population?

It is important to note that most of the research on the fitness levels of people with mental retardation is for individuals with mild or moderate mental retardation. There is very little research on people with severe mental retardation. Several studies have shown that the fitness levels of people with mental retardation are significantly lower than the general population. Most people with mental retardation lead an inactive lifestyle, and are, therefore, more likely to develop hypokinetic diseases. Some experts consider physical inactivity a major health risk among people with mental retardation.

How do people with mental retardation compare to the general population in muscle strength and endurance?

Most people with mental retardation have much lower strength levels than the general population, which may limit their employment opportunities in work settings that require a high level of muscular fitness. A low level of muscle strength and endurance also makes it difficult to perform activities such as lifting or carrying objects or walking up a flight of stairs. Researchers have shown that: (a) body strength is valuable for recreation activities and activities of daily living; (b) good upper body muscles increase vocational opportunities; and (c) there is a relationship between good muscle strength and good performance of people with mental retardation in industrial work settings.

How do people with mental retardation compare to the general population in cardiovascular endurance?

Cardiovascular endurance is considered by most exercise experts to be the most important indicator of fitness. The majority of researchers who have tested the cardiovascular fitness levels of people with mental

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retardation have reported fitness levels similar to those of the most inactive people in the general population. In one study it was shown that the cardiovascular endurance of adults with mental retardation was as low as people with heart problems.

How do people with mental retardation compare to the general population in body composition (body fat)?

A large number of adults with mental retardation are overweight. Whereas one-third of all Americans are overweight, close to one-half of all people with mental retardation are overweight. Women with mental retardation are more overweight than men with mental retardation, and people with mild mental retardation are more overweight than people with severe mental retardation. The high levels of obesity (excess fat) reported in a large number of people with mental retardation can create barriers to successful employment, participation in leisure activities, performance of daily living activities and negatively affect other quality of life areas.

Can people with mental retardation improve their fitness level?

Yes. Several studies have shown that after several weeks of training, people with mental retardation can make significant gains in fitness. In one study it was found that after a nine week strength training program, participants with mental retardation showed a dramatic improvement in strength, ranging from 25 percent to over 100 percent in several different muscle groups. In another study, participants made a lot of improvements in cardiovascular endurance by training on stationary cycles.

Why are so many individuals with mental retardation still physically unfit?

Two major barriers to improving the fitness levels of someone with mental retardation are motivation and opportunity. Many adults with mental retardation are not encouraged by others to join health clubs or to exercise on their own. In addition, most instructors in health clubs and other fitness programs do not understand how to develop an appropriate exercise program for someone with mental retardation, and are often reluctant to work with special populations because of this lack of knowledge.

Another problem is that most direct service staff who work with people who have mental retardation have little physical fitness training and, therefore, do not know how to develop or modify fitness programs to keep them challenging, injury-free and successful. Furthermore, if staff are inactive and uninterested in fitness, more than likely the person with mental retardation will mimic this behavior and have little interest in improving his or her own fitness.

What is a good starting point for improving the fitness levels of people with mental retardation?

Recently published guidelines by the Centers for Disease Control and Prevention state that all Americans should have a minimum of 30 minutes a day of physical activity, preferably every day of the week. This includes people with mental retardation. A good starting point would be to have fifteen minutes in the morning and fifteen minutes in the evening of some type of physical activity such as walking, stationary cycling, or climbing stairs. This should be done five to seven days a week.

Other good fitness routines include:

- Carrying groceries to and from the store
- Going hiking on the weekends in a local park
- Walking through malls during the winter months
- Taking the stairs at all times instead of the elevator
- Lifting light weights (or soup cans if you don't have weights) while watching television
- Doing an exercise video that is not too strenuous

People with mental retardation should also be encouraged to participate in community exercise programs. The Americans with Disabilities Act (ADA) states that recreational buildings and programs should be accessible to people with disabilities. Therefore, health clubs and other fitness centers must offer programs that are appropriate for people with mental retardation, and they cannot add a surcharge to that person's fees (unless every person is charged the same fee).

References and Resources

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Professional Associations

American Alliance for Health, Physical Education, Recreation, and Dance (AAHPERD)
American Association for Active Lifestyles and Fitness (AAALF)
Adapted Physical Activity Council (APAC)
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Reston, VA 22091
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For AAALF (part of AAHPERD), contact Dr. Janet Seaman, AAALF Executive Director, at the address, telephone or e-mail address above.

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